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STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

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November 7, 1996

Mr. Thomas K. Teynor
U.S. Department of Energy
P.O. Box 550, MSIN: S7-55
Richland, WA 99352

Mr. William D. Adair
Fluor Daniel Hanford, Inc.
P.O. Box 1000, MSIN: H6-21
Richland, WA 99352

Mr. John Winterhalder
Rust Federal Service of Hanford, Inc.
P.O. Box 700, MSIN: H6-21
Richland, WA 99352

Dear Messrs. Teynor, Adair, and Winterhalder:

Re: Dangerous Waste Compliance Inspection of the 222-S Laboratory Complex, September 27 through October 8, 1996

Thank you for the assistance of the U.S. Department of Energy (USDOE), Fluor Daniel Hanford, Inc. (FDH), and Rust Federal Service of Hanford, Inc. (RFSH) personnel during the Washington State Department of Ecology's (Ecology) recent inspection of the 222-S Laboratory Complex.

Findings from this inspection include the following six violations of Washington State's Dangerous Waste Regulations and one concern. The potential impacts to worker safety posed by these violations are serious. Ecology has taken into consideration the recent changeover of the 222-S Laboratory Complex to new management, in this case. It is primarily for this reason Ecology has elected not to pursue formal enforcement at this time. The time lines for the corrective measures contained in this letter are an allowance for administrative changes to occur. The substantive requirements of the corrective measures are expected to be implemented immediately.

VIOLATIONS:

#1) WAC 173-303-805, Interim Status Permits.

The 222-S Laboratory Complex treated and stored dangerous waste by processes not specified in Part A of their Dangerous Waste Permit Application.

USDOE and its contractors failed to describe all waste management processes occurring at the 222-S Laboratory Complex in the facility's Part A, Dangerous Waste Permit Application as required per subsection (6).

#2) WAC 173-303-200, Accumulating Dangerous Wastes On-Site.

Waste accumulated in laboratory fume hoods was not under the control of the operators generating the waste.

USDOE and its contractors failed to maintain sufficient control of waste accumulated in fume hood waste collection bottles, per subsection (2)(a).

#3) WAC 173-303-200, Accumulating Dangerous Wastes On-Site.

Mixed waste initially accumulated in laboratory fume hoods was not transferred to 90-day or a permitted storage area.

USDOE and its contractors failed to consolidate waste initially accumulated in laboratory fume hoods, per WAC 173-303-040, "Satellite Accumulation Area."

#4) WAC 173-303-170, Requirements for Generators of Dangerous Waste.

Mixed wastes generated in laboratory fume hoods were inadequately designated as dangerous waste or extremely hazardous waste.

USDOE and its contractors failed to obtain adequate knowledge to properly desingate wastes generated by laboratory analytical methods performed in the 222-S Laboratory Complex. Waste Stream Fact Sheets from fume hood procedures were used to describe dangerous waste constituent quantities and concentrations generated from laboratory analytical methods. However, the Waste Stream Fact Sheets were predicated on process knowledge which did not demonstrate sufficient knowledge for designation, per WAC 173-303-070 (3).

#5) 40 CFR 265.13 General Waste Analysis by reference of WAC 173-303-400, Interim Status Facility Standards.

Wastes incoming to the 219-S tank system from processes outside of the 222-S Laboratory Complex were not adequately verified to confirm the facility's knowledge of these wastes prior to treating , storing, or disposing of them.

USDOE and its contractors failed to incorporate adequate verification parameters in the 219-S Waste Analysis Plan to confirm the facility's knowledge of wastes generated outside of the 222-S Laboratory Complex, per WAC 173-303-300.

#6) WAC 173-303-630, Use and Management of Containers.

USDOE and its contractors failed to adequately ensure that containers used to collect waste in laboratory fume hoods are compatible with chemicals used in the analytical procedures generating the waste.

222-S Laboratory analytical processes employ extremely toxic, corrosive, and reactive chemicals. Inadequate information is provided to ensure waste collection containers are compatible with dangerous wastes collected in them, per subsection (4).

CONCERNS:

USDOE and its contractors failed to determine the cause of the emergency reported in Hanford Occurrence Report # RL-WHC-ANALLAB-1996-0035.

The critique prepared by 222-S management of the reaction which occurred after the addition of concentrated hydrochloric acid to the waste collection bottle in fume hood #1, room 4A, failed to identify the cause of the event to prevent reoccurrence of similar emergencies.

In order to correct the violations identified in this letter, please complete the following corrective measures within the time frames specified. Please be advised, failure to correct these violations within the specified time frames may result in the issuance of an administrative and/or penalty as authorized by the Revised Code of Washington, RCW 70.105.080 and 70.105.095. A request for additional time to complete the required corrective measures must be in writing and received by me for consideration, no later than, November 25, 1996.

CORRECTIVE MEASURES:

Corrective Measure #1: Interim Status Permits.

Within sixty (60) days of receipt of this letter, USDOE and its contractors must submit (to Ecology) a revised Part A Dangerous Waste Permit Application for the 222-S Laboratory Complex to include all processes contributing waste to the 222-S TSD and/or the 219-S tank system.

Corrective Measure #2: Accumulating Dangerous Wastes On-Site.

Within ninety (90) days of receipt of this letter, USDOE and its contractors must incorporate training classes into its facility RCRA training plan for proper waste management procedures for all satellite accumulation areas within the 222-S Laboratory Complex. The training plan must identify those personnel, by job class and name, having job responsibilities that include managing or handling waste collected in satellite accumulation areas. Personnel must be instructed in regulatory requirements for satellite accumulation and facility specific procedures. This instruction must ensure waste accumulated in satellite accumulation areas remains under the constant control of personnel while adding, transferring, or in any way managing wastes in satellite accumulation areas. This training must include instruction on use of compatible containers, per corrective measure # 6 below. Personnel must be trained to these standards within sixty (60) days from the date of incorporation of this training course in the facility's RCRA training plan.

Corrective Measure #3: Accumulating Dangerous Wastes On-Site.

Within thirty (30) days of receipt of this letter, USDOE and its contractors must identify all satellite accumulation areas within the 222-S Laboratory Complex. USDOE and its contractors must ensure, for all waste streams generated within the 222-S Laboratory Complex, the point where wastes are initially accumulated for each waste stream is the designated satellite accumulation area for that waste stream. Subsequent storage or transfer of satellite accumulated wastes may occur in ninety (90) day accumulation areas or permitted treatment or storage facilities.

Corrective Measure #4: Requirements for Generators of Dangerous Waste.

Within thirty (30) days of receipt of this letter, USDOE and its contractors must accurately characterize, by analysis if neccessary, all waste streams generated in fume hoods within the 222-S Laboratory Complex and submit a report to Ecology describing the accurate characterization of each waste stream. This report must describe, at a minimum, the process generating the waste, the materials used in the process, analysis performed to characterize the waste generated from the

process, or where analysis is not performed, the rationale for charcterizing the waste by process knowledge. If comparisons to wastes generated from similar processes are used to characterize any waste stream, such comparisons must include analytical data from the similar waste stream and the rationale for the comparison.

Corrective Measure #5 General Waste Analysis.

Within thirty (30) days of receipt of this letter, USDOE and its contractors must append the waste analysis plan for the 222-S Laboratory Complex to include specific parameters and procedures used to verify generator's designation for all wastes destined for the 222-S Laboratory Complex per, WAC 173-303-300 (2).

Corrective Measure #6 Use and Management of Containers.

Within thirty (30) days of receipt of this letter, USDOE and its contractors must include written direction for use of containers compatible with waste generated in laboratory fume hoods in waste management instructions or procedures.

Please return the completed Certificate of Compliance by February 3, 1997. Do not hesitate to contact me at (509) 736-3031, if you have questions regarding this letter.

Sincerely,

Bob Wilson

Bob Wilson, Compliance Inspector
Nuclear Waste Program

BW:sb
Enclosure

cc: James Rasmussen, USDOE
Sue Price, FDH
Mary Lou Blazek, ODOE
Administrative Record: 222-S

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